

What is claimed is:

1. A joint endoprosthesis comprising:
a body configured to replace a portion of a mammalian joint;
at least one sensor supported by said body, said sensor adapted to sense
an ambient condition of the mammalian joint and to generate a condition signal
indicative of the sensed condition; and
a transmission element connected to said sensor to receive said condition
signal and operable to transmit a signal indicative of said condition signal.
2. The joint endoprosthesis of claim 1, wherein said sensor is a
temperature sensor and the ambient condition is temperature.
3. The joint endoprosthesis of claim 1, wherein said sensor is a pH
sensor and the ambient condition is pH.
4. The joint endoprosthesis of claim 1, wherein said sensor is
configured to determine the presence of a biological material.
5. The joint endoprosthesis of claim 1, wherein said sensor is a
configured to sense the presence of a pre-determined liquid.
6. The joint endoprosthesis of claim 1, wherein said body is a
component of a joint prosthesis selected from the group of a hip prosthesis, a
knee prosthesis, a shoulder prosthesis and an elbow prosthesis.
7. The joint endoprosthesis of claim 1, wherein said transmission
element includes an alarm.

8. The joint endoprosthesis of claim 1, wherein said transmission element includes a transmitter supported by said body and configured to transmit a signal to a receiver located outside the joint indicative of said condition signal.

9. The joint endoprosthesis of claim 8, wherein said transmission element includes an antenna and a power source providing power to said antenna.

10. The joint endoprosthesis of claim 1, further comprising a power source supported by said body and connected to provide power to said sensor and said communication element.

11. The joint endoprosthesis of claim 10, wherein said power source is a passive power source.

12. A system for sensing a condition within a mammalian joint comprising:

an endoprosthesis including a body configured to replace a portion of the joint;

a sensor supported by said body, said sensor adapted to sense an ambient condition of the mammalian joint and to generate a condition signal indicative of the sensed condition;

a transmitter connected to said sensor to receive said condition signal and operable to transmit a transmission signal outside the joint indicative of said condition signal;

a receiver disposed outside the joint for receiving said transmission signal; and

translation circuitry for translating said transmission signal to a human sensible signal.

13. The system for determining a condition within a mammalian joint of claim 12 wherein said translation circuitry includes an alarm.

14. The system for determining a condition within a mammalian joint of claim 13, wherein said alarm is configured to produce an audible signal.

15. The system for determining a condition within a mammalian joint of claim 13, wherein said alarm is configured to produce a vibration.

16. The system for sensing a condition within a mammalian joint of claim 12, wherein said translation circuitry includes a display configured to produce a visually sensible signal.

17. A method for determining a condition within a mammalian joint comprising the steps of:

introducing a sensor within the joint, the sensor adapted to sense an ambient condition of the joint and to generate a sensor signal indicative of the ambient condition;

coupling the sensor with a transmission element operable to transmit an information signal outside the joint in response to the sensor signal;

sensing the ambient condition within the joint; and

transmitting the information signal.

18. The method for determining a condition within a mammalian joint of claim 17, further comprising the step of:

analyzing the sensor signal to determine whether the ambient condition is abnormal; and

transmitting a human sensible warning signal in response thereto.